

(FILE 'HOME' ENTERED AT 16:49:07 ON 27 JUN 2003)

FILE 'REGISTRY' ENTERED AT 16:51:30 ON 27 JUN 2003

L1 STRUCTURE UPLOADED

L2 30 S L1

L3 10050 S L1 FULL

FILE 'CAPLUS' ENTERED AT 16:52:24 ON 27 JUN 2003

L4 3857 S L3

L5 3097 S L4 AND PY<2001

L6 0 S L5 AND NAGY, SANDOR M./AU

=> d 15 1-50 bib abs

L5 ANSWER 1 OF 3097 CAPLUS COPYRIGHT 2003 ACS

AN 2002:586622 CAPLUS

DN 137:268913

TI A theoretical study on Al-CVD using dimethylethylamine alane

AU Tsujii, Hideji; Nakajima, Tohru; Yamashita, Koichi

CS Department of Chemistry System Engineering, Graduate School of Engineering, University of Tokyo, Tokyo, 113-8656, Japan

SO Advanced Metallization Conference 2000, Proceedings of the Conference, San Diego, CA, United States, Oct. 2-5 and University of Tokyo, Tokyo, Japan, Oct. 19-20, 2000 (2000), 685-690. Editor(s): Edelstein, Dan.

Publisher: Materials Research Society, Warrendale, Pa.

CODEN: 69CXY4; ISBN: 1-55899-574-9

DT Conference

LA English

AB The reaction mechanism of the Al-CVD process using dimethylethylamine alane (DMEAA) as the source gas was theor. studied. It was found that: (1) the DMEAA dissocs. into DMEA and AlH₃ on the Al(111) surface, and not in the gas phase; (2) that AlH₃ dissocs. into AlH and two H atoms on Al(111) with an activation energy of 8.7 kcal/mol; and (3) that the rate detg. step is the formation of H mols. from adsorbed H atoms.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 2 OF 3097 CAPLUS COPYRIGHT 2003 ACS

AN 2002:290810 CAPLUS

DN 136:310333

TI Linear phosphine-borane polymers and their preparation

IN Manners, Ian; Dorn, Hendrik

PA Can.

SO U.S., 8 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6372873	B1	20020416	US 2000-541717	20000403
CA 2302181	AA	20001001	CA 2000-2302181	20000324 <--
PRAI CA 1999-2268218	A	19990401		

AB Linear backbone P-B polymers have structure [PR₁R₂BR₃R₄]_n, where R₁, R₂, R₃, and R₄ = H, optionally substituted alkyl, alkenyl and Ph; and n .gtoreq.2, and particularly high mol. wt. polymers of wt.-av. mol. wt. .gtoreq.10,000. The polymers are of use as fire retardants. PhPH₂.BH₃ (8.27 mmol) and (Rh[1,5-cod]2)[OTf] (0.1 mol%) were heated at 90.degree. for 14 h in PhMe and pptn. of the product from hexane gave air-stable poly(Ph phosphinoborane), yield 0.678 g (67%).

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 3 OF 3097 CAPLUS COPYRIGHT 2003 ACS
 AN 2002:45655 CAPLUS
 DN 137:33348
 TI A new organodithiophosphoric derivative; synthesis and structural characterization of bis(diphenylborano)dithiophosphoric [(C₆H₅)₂BO]₂P(S)SH
 AU Gabriela, Cretiu; Reka, Torok; Delia, Bugnariu; Oxana, Jeman; Silaghi-Dumitrescu, Ioan
 CS Universitatea "Babes-Bolyai", Facultatea de Chimie si Inginerie Chimica, Cluj-Napoca, RO-3400, Rom.
 SO Studia Universitatis Babes-Bolyai, Chemia (1999), 44(1-2), 177-182
 CODEN: SUBCAB; ISSN: 1224-7154
 PB Studia Universitatis Babes-Bolyai
 DT Journal
 LA English
 OS CASREACT 137:33348
 AB A new organo deriv. of dithiophosphoric acid (RO)₂P(S)SH was obtained by the reaction of P pentasulfide (P₄S₁₀) with diphenylborinic acid. IR, ¹H, ¹³C, ¹¹B and ³¹P NMR spectra of intermediates and the main product are discussed. Geometrical parameters (distances in Å, angles in degrees) for the min. energy structure were studied by ab initio RHF/3-21G* using Spartan version 5.0 installed on a SGI Octane.
 RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 4 OF 3097 CAPLUS COPYRIGHT 2003 ACS
 AN 2001:774627 CAPLUS
 DN 136:263075
 TI Synthesis of 8-bromoisoquinolines and a crystal structure of an acyclic secondary amine-borane
 AU Armengol, Montserrat; Helliwell, Madeleine; Joule, John A.
 CS Chem. Dep., The Univ. of Manchester, Manchester, M13 9PL, UK
 SO ARKIVOC [online computer file] (2000), 1(5), 823-842
 CODEN: AKVCFI
 URL: <http://www.arkat.org/arkat/journal/Issue5/ms0083/ms0083.pdf>
 PB ARKAT Foundation
 DT Journal; (online computer file)
 LA English
 AB 8-Bromo-7-methoxyisoquinoline was produced by Jackson's modification of the Pomeranz-Fritsch ring synthesis accompanied by 8-bromo-3-(8-bromo-7-methoxyisoquinolin-4-yl)-1,2,3,4-tetrahydro-7-methoxy-2-(4-methylphenylsulfonyl)isoquinoline. A mechanism for the formation of the latter is suggested. The ready formation of secondary amine-BH₃ complexes was noted and the x-ray crystal structure of N-(2-bromo-3-methoxybenzyl)aminoacetaldehyde di-Me acetal borane detailed.
 RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 5 OF 3097 CAPLUS COPYRIGHT 2003 ACS
 AN 2001:286232 CAPLUS
 DN 135:46225
 TI Thermolysis of alkoxyaluminum and siloxyaluminum acylates
 AU Stepovik, L. P.; Kazakina, S. V.; Martynova, I. M.
 CS Lobachevskii Nizhni Novgorod State University, Nizhniy Novgorod, Russia
 SO Russian Journal of General Chemistry (Translation of Zhurnal Obshchei Khimii) (2000), 70(9), 1371-1377
 CODEN: RJGCEK; ISSN: 1070-3632
 PB MAIK Nauka/Interperiodica Publishing
 DT Journal
 LA English
 AB Thermolysis of alkoxyaluminum acylates (RO)_nAl(OCOR')_{3-n} (n = 1, 2; R = i-Pr, s-Bu, t-Bu, R' = Ph, CH₂I; R = PhCH₂, R' = Me, Et, Ph; R = Me₃Si, Et₃Si, R' = Me) was studied. The main direction of thermolysis of derivs. of primary and secondary alcs. and of unsubstituted carboxylic acids is

ester and alc. formation. Trialkylsiloxyaluminum acylates thermolyze to give in the first stage no other products than trialkylacyloxysilanes. Thermolysis of iodoacylates (RO)2AlOCOCH2I (R = Pr, s-Bu) involves oxidn. of the alkoxy group to carbonyl compds. with simultaneous formation of a ketene and hydrogen iodide. Tert-Butoxyaluminum acylates regardless of the structure of substituent in the acyloxy group undergo symmetrization to aluminum tert-butylate.

RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 6 OF 3097 CAPLUS COPYRIGHT 2003 ACS
AN 2001:229911 CAPLUS
DN 134:259448
TI Crystal structure of (1.alpha.,5.beta.,8.beta.,8a.beta.)-1-methyl-1,2,3,5,8,8a-hexahydro-5,8-epoxyquinoline(N-B)borane, C9H10NO(CH3)(BH3)
AU Peters, K.; Peters, E.-M.; Drinkuth, S.; Groetsch, S.; Christl, M.
CS Max-Planck-Institut fur Festkorperforschung, Stuttgart, D-70506, Germany
SO Zeitschrift fuer Kristallographie - New Crystal Structures (2000), 215(4), 600
CODEN: ZKNSFT; ISSN: 1433-7266
PB R. Oldenbourg Verlag
DT Journal
LA English
AB Crystals of the title compd. are monoclinic, space group P21/c, a 7.764(1), b 17.758(2), c 7.869(1) .ANG., .beta. 113.28(1).degree.; Z = 4; Rgt(F) = 0.056, Rw ref(F2) = 0.165; T = 293 K: At. coordinates are given.
RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 7 OF 3097 CAPLUS COPYRIGHT 2003 ACS
AN 2001:224480 CAPLUS
DN 134:237659
TI Process for preparing chiral phosphine-borane complex and application in synthesizing amino acids
IN Zhang, Shengyong; Jiang, Ru; Li, Xiaoye; Zhang, Bangle; Sun, Xiaoli
PA Peop. Rep. China
SO Faming Zhuanti Shenqing Gongkai Shuomingshu, 8 pp.
CODEN: CNXXEV
DT Patent
LA Chinese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CN 1264707	A	20000830	CN 1999-100814	19990223 <--
PRAI	CN 1999-100814		19990223		
OS	CASREACT 134:237659				
AB	The chiral complex (COD) [R- ethylenebis(diphenylphosphine)]rhodium(I) hexafluorophosphate (COD = cyclooctadiene; R = Ph or cyclohexyl) is prepd. by esterifying R-glycol with methanesulfonyl chloride in the presence of pyridine to obtain R-glycol dimethanesulfonate; substituting with triphenylphosphine-borane in THF in the presence of Li and tert-Bu chloride to obtain (S)-R- ethylenebis(diphenylphosphine)-bis(borane) (1:2), decomp. with HFB4/ethyl ether to obtain (S)-R- ethylenebis(diphenylphosphine), and complexing with [Rh(COD)Cl]2 and KPF6 in dichloromethane. The chiral complex is used as asym. hydrogenation for synthesis of amino acid deriv. Me L-phenylalaninate and Me L-alaninate are synthesized by hydrogenating 2-acetamidocinnamic acid or 2-acetamidoacrylic acid, and hydrolyzing and esterifying with methanol in the presence of H2SO4.				

L5 ANSWER 8 OF 3097 CAPLUS COPYRIGHT 2003 ACS
AN 2001:220487 CAPLUS
DN 134:237658
TI Synthesis of chiral phosphine-borane complex and its application in

asymmetric hydrogenation

IN Zhang, Shengyong; Sun, Xiaoli; Li, Xiaoye
PA Peop. Rep. China
SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 6 pp.
CODEN: CNXXEV
DT Patent
LA Chinese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CN 1264706	A	20000830	CN 1999-100813	19990223 <--
PRAI	CN 1999-100813		19990223		

OS CASREACT 134:237658

AB The chiral complex (cyclooctadienyl)[(1S,2S)-1,2-diphenylethylenebis(diphenylphosphine)]rhodium(I) hexafluorophosphate is synthesized by adding (E)-1,2-diphenylethylene in tert-butanol/water in the presence of methanesulfonamide at 0.degree. for 12 h and at room temp. for 11 h, extg. to obtain (1S,2S)-1,2-diphenyl-1,2-ethanediol; mesylating with methanesulfonyl chloride in the presence of pyridine at 0.degree. for 3 h and at room temp. for 2 h, extg. to obtain (1S,2S)-1,2-diphenyl-1,2-ethanediol dimethanesulfonate; substituting with triphenylphosphine-borane in THF in the presence of Li at room temp. for 9 h, extg. to obtain (1S,2S)-1,2-diphenylethylenebis(diphenylphosphine)borane, decomp. with HBF₄/ethyl ether to obtain (1S,2S)-1,2-diphenylethylenebis(diphenylphosphine), complexing with rhodium(I) chloride dimer in dichloromethane/water in the presence of excess KPF₆ for 30 min under bubbling N₂, distg. to remove solvent, and pptg. in ethanol. The chiral complex is used as asym. hydrogenation for prepn. of L-amino acid or its deriv. such as phenylalanine, alanine, and dopamine with optical purity of >90%. Me L-alaninate is prepd. by hydrogenating 2-acetamidoacrylic acid in methanol at room temp. and H₂ pressure of 20 kg/cm² for 20 h, and hydrolyzing and esterifying with methanol. Me L-phenylalaninate and L-N-acetyldopamine deriv. are prepd. from 2-acetamidocinnamic acid and 2-acetamido-4'-hydroxy-3'-methoxycinnamic acid, resp.

L5 ANSWER 9 OF 3097 CAPLUS COPYRIGHT 2003 ACS

AN 2001:202219 CAPLUS

DN 134:229853

TI MOVPE-growth and characterization of AlGaAs/GaAs v-groove quantum wires

AU Kaluza, Andreas

CS Inst. Schicht- und Ionentechnik, Germany

SO Berichte des Forschungszentrums Juelich (2000), Juel-3805, i-vi, 1-147

CODEN: FJBEE5; ISSN: 0366-0885

DT Report

LA German

AB The MOVPE-growth of v-groove quantum wires was studied. The aim was to prep. quantum wires, on which 1D transport can be studied. This requires high quality material as well as a large subband spacing, which is influenced by the geometry of the structures. To achieve this, the influence of growth temp. and different metalorg. precursors on the geometry and the material quality of the GaAs quantum wells and the AlGaAs barriers was examd. First a parameter window was detd., in which high quality material can be achieved. Within this window the influence on the geometry of the quantum wires was examd. Here it was found that the growth temp. and the choice of the Ga precursor have the biggest influence. By solving the Schrodinger equation the geometry which gives the highest subband spacing was detd. In this way parameters were found, that lead to quantum wires with the desired properties.

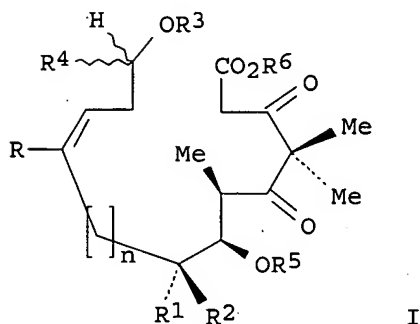
RE.CNT 111 THERE ARE 111 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 10 OF 3097 CAPLUS COPYRIGHT 2003 ACS

AN 2001:195837 CAPLUS

DN 134:222565
 TI Synthesis of epothilones, intermediates and analogs for use in treatment of cancers with multidrug-resistant phenotype
 IN Danishefsky, Samuel J.; Bertinato, Peter; Su, Dai-Shi; Meng, Dongfang; Chou, Ting-Chao; Kamenecka, Ted; Sorensen, Erik J.; Balog, Aaron; Savin, Kenneth A.; Kuduk, Scott; Harris, Christina; Zhang, Xiu-Guo; Bertino, Joseph R.
 PA Sloan-Kettering Institute for Cancer Research, USA
 SO U.S., 164 pp., Cont.-in-part of Ser. No. US 1997-986025, filed on 3 Dec 1997
 CODEN: USXXAM
 DT Patent
 LA English
 FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6204388	B1	20010320	US 1999-257072	19990224
	US 6242469	B1	20010605	US 1997-986025	19971203
	ZA 9901497	A	19990824	ZA 1999-1497	19990224 <--
	US 6316630	B1	20011113	US 2000-588925	20000606
	US 6300355	B1	20011009	US 2000-662426	20000913
	US 6369234	B1	20020409	US 2000-686158	20001011
	US 6284781	B1	20010904	US 2000-691615	20001018
	US 2002058286	A1	20020516	US 2001-797027	20010301
	US 2002002194	A1	20020103	US 2001-874514	20010605
	US 2003105330	A1	20030605	US 2002-62376	20020201
	US 2003069277	A1	20030410	US 2002-135433	20020430
PRAI	US 1996-32282P	P	19961203		
	US 1997-33767P	P	19970114		
	US 1997-47566P	P	19970522		
	US 1997-47941P	P	19970529		
	US 1997-55533P	P	19970813		
	US 1997-986025	A2	19971203		
	US 1998-75947P	P	19980225		
	US 1998-92319P	P	19980709		
	US 1998-97733P	P	19980824		
	US 1999-257072	A3	19990224		
	US 2000-680493	B1	20001005		
OS	MARPAT 134:222565				
GI					



AB Syntheses of epothilone A and B, desoxyepothilones A and B, and protected ketoester precursors (I) [R,R1,R2 = independently H, (un)substituted linear or branched chain alkyl; R3 = CHY=CHX, H, linear or branched chain alkyl, Ph, 2-methyl-1,3-thiazolinyl, 2-, 3-, or 4-furanyl, 2-, 3-, or 4-pyridyl, imidazolyl, 2-methyl-1,3-oxazolinyl, 3- or 6-indolyl; X = H,

linear or branched chain alkyl, Ph, 2-methyl-1,3-thiazolinyl, 2-, 3-, or 4-furanyl, 2-, 3-, or 4-pyridyl, imidazolyl, 2-methyl-1,3-oxazolinyl, 3- or 6-indolyl; Y = H, linear or branched chain alkyl; X = O, substituted NOH, substituted NNH₂; n = 1-2, R₄ = linear or branched chain alkyl, (un)substituted aryloxyalkyl, trialkylsilyl, aryldialkylsilyl, diarylalkylsilyl, troarylsilyl; R₅ = tertiaryalkyl; R₆ = H, t-butyloxycarbonyl, amyloxycarbonyl, (trialkylsilyl)alkyloxycarbonyl, (dialkylarylsilyl)alkoxycarbonyl, benzyl, trialkylsilyl, dialkylarylsilyl, alkylarylsilyl, triarylsilyl, linear or branched acyl, (un)substituted aroyl] and their intermediates are described. Activities of novel compns. based on epothilones and I and methods for the treatment of cancer and cancer which has developed a multidrug-resistant phenotype are presented.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 11 OF 3097 CAPLUS COPYRIGHT 2003 ACS

AN 2001:149465 CAPLUS

DN 134:357748

TI Ab initio calculations of anions of closo-alane and gallane A₆H₆²⁻ and Al₁₂H₁₂²⁻ and Al₁₂H₁₂L salts with cations L = Li⁺, Na⁺, Be²⁺, Mg²⁺, Al³⁺, H⁺ coordinated inside and outside the icosahedral Al₁₂ cluster

AU Charkin, O. P.; Klimenko, N. M.; Schleyer, P. v. R.

CS Inst. Problem Khim. Fiz., RAN, Chernogolovka, Russia

SO Zhurnal Neorganicheskoi Khimii (2000), 45(10), 1678-1690

CODEN: ZNOKAQ; ISSN: 0044-457X

PB MAIK Nauka/Interperiodica Publishing

DT Journal

LA Russian

AB The authors used HF and DFT-B3LYP methods with 6-31G* and 6-311+G** basis sets to calc. geometries, vibrational, magnetic, and energy characteristics of isomers of Al₆H₆²⁻, Ga₆H₆²⁻, Al₁₂H₁₂²⁻, Ga₁₂H₁₂²⁻ and ti title salts.

L5 ANSWER 12 OF 3097 CAPLUS COPYRIGHT 2003 ACS

AN 2001:148215 CAPLUS

DN 134:230147

TI Superiority of DMAH to DMEAA for Al CVD technology

AU Matsushashi, Hideki; Lee, Chang-Hun; Nishimura, Takamasa; Masu, Kazuya; Tsubouchi, Kazuo

CS Research Institute of Electrical Communication, Tohoku University, Sendai, 980-8577, Japan

SO Materials Science in Semiconductor Processing (1999), 2(4), 303-308

CODEN: MSSPFQ; ISSN: 1369-8001

PB Elsevier Science Ltd.

DT Journal

LA English

AB The superiority of dimethylaluminumhydride [Me₂AlH, DMAH] to dimethylethylaminealane [AlH₃NMe₂Et, DMEAA] was studied from the view point of Al CVD technol. in ULSI manufg. Both DMAH and DMEAA have the same filling capability such as surface morphol. and step coverage. For deposition reproducibility, the smaller activation energy is more suitable for manufg. The activation energy of Al deposition is 0.38 [eV] for DMAH and 0.74 [eV] for DMEAA. These results mean the reproducibility of Al thickness using DMAH is superior to that using DMEAA. For safe storage and precise precursor delivery, the precursor should be chem. stable. From the results of measuring the pressure increase in vessel, DMAH has superior chem. stability to DMEAA. Manufg. app. such as Al CVD cluster module requires the deposition selectivity that is defined as Al deposition only on the desired areas of wafer surface and not on any parts of cluster module. Using DMAH, Al is deposited on barrier metal surface of Si wafer, while Al is not deposited on the sealed anodic oxidized Al or the synthetic quartz. DMAH showed excellent selectivity in comparison with DMEAA. Therefore, DMAH is superior to DMEAA as a precursor for the

Al CVD technol. in ULSI manufg.

RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 13 OF 3097 CAPLUS COPYRIGHT 2003 ACS
AN 2001:145699 CAPLUS
DN 135:112539
TI Ab initio models for six-center multiple proton exchange and ion pair
 formation assisted by Lewis acids
AU van Eikema Hommes, Nicolaas J. R.; Heidrich, Dietmar; von Rague Schleyer,
 Paul
CS Computer-Chemie-Centrum, Univ. Erlangen-Nurnberg, Erlangen, D-91052,
 Germany
SO Journal of Molecular Modeling [online computer file] (2000),
 6(9), 563-574
 CODEN: JMMOFK; ISSN: 0948-5023
 URL: <http://link.springer.de/link/service/journals/00894/papers/0006009/00060563.pdf>
PB Springer-Verlag
DT Journal; (online computer file)
LA English
AB High level ab initio and d. functional calcns., extrapolated to
 QCISD(T)/6-311+G(3df,2p)//MP2/6-31+G**+ZPE, reveal that cyclic ion pairs
 can form in the hydrogen bonded complexes of haloboric acids BHnX3-n-HX, X
 = F, Cl, with Lewis bases HX, H2O, CH3OH, and NH3, even in isolation
 (e.g., in the gas phase). The intrinsic acidities (deprotonation
 energies) required for protonation of these bases with formation of gas
 phase ion pairs are calcd. to be < 295 kcal/mol for water, < 301 kcal/mol
 for methanol, and < 306 kcal/mol for ammonia; such values are common for
 acidic sites in zeolites. All gas phase ion pairs prefer sym. bidentate
 or tridentate structures. In the other cases where hydrogen bonded
 complexes prevail, sym. ion pair-like transition structures for multiple
 hydrogen exchange are computed.

RE.CNT 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 14 OF 3097 CAPLUS COPYRIGHT 2003 ACS
AN 2001:141767 CAPLUS
DN 134:298131
TI Antiwear and extreme-pressure activity of some sulphur, nitrogen and boron
 compounds
AU Herdan, J. M.
CS ICERP S.A., Ploiesti, 2000, Rom.
SO Journal of the Balkan Tribological Association (2000), 6(3-4),
 145-150
 CODEN: JBTA4; ISSN: 1310-4772
PB Scientific Bulgarian Communications Ltd.
DT Journal
LA English
AB Compds. contg. sulfur and nitrogen are well known additives for
 lubricating oils. They are mainly antiwear and extreme-pressure
 additives, but some of them are antioxidant and corrosion inhibitors, too.
 Boron compds. have also found applications as antiwear and
 extreme-pressure additives but their practical use is rather limited
 because of stability and hydrolysis problems. We succeeded in
 synthesizing new additives contg. sulfur, nitrogen and boron in the same
 mol., compds. which are quite stable to storage and hydrolysis. The
 thermal and storage stability was evaluated using warm and cold cycles and
 IR spectra. Hydrolytic stability was tested on a 5% soln. of the additive
 in Neutral 100 paraffinic base oil, in the presence of 2% water. Every 48
 h the oil was analyzed and changes in the IR spectra were recorded. The
 storage and hydrolytic stability of the additives is comparable with
 common overbased calcium sulfonates normally used in engine oil
 formulations. The antiwear and extreme-pressure performances of the

additives were evaluated on the four ball machine. After the introduction of the boron in the mol. a remarkable enhancement in these properties was obsd.

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 15 OF 3097 CAPLUS COPYRIGHT 2003 ACS
AN 2001:141019 CAPLUS
DN 134:310740
TI Triphenylbutylphosphonium borohydride: a selective reducing agent
AU Mohanazadeh, Farajollah; Tajbakhsh, Mahmoud; Haghdadi, Mina
CS Institute of Chemistry, Faculty of Science, Mazandaran University,
 Babolsar, Iran
SO International Journal of Chemistry (2000), 10(2), 191-194
 CODEN: INJCEW
PB Institute of Science & Technology
DT Journal
LA English
OS CASREACT 134:310740
AB The utility of triphenylbutylphosphonium borohydride as a reducing agent
 was studied. This reductant reduces aldehydes, ketones, and acid
 chlorides to their corresponding alcs. It shows excellent selectivity and
 chemoselectivity in redn. of aldehydes in the presence of ketones.

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 16 OF 3097 CAPLUS COPYRIGHT 2003 ACS
AN 2001:122559 CAPLUS
DN 134:274057
TI Growth and study of metal Al nanoobjects on GaAs
AU Vostokov, N. V.; Danil'tsev, V. M.; Drozdov, M. N.; Drozdov, Yu. N.;
 Murel, A. V.; Khrykin, O. I.; Shashkin, V. I.
CS Inst. Fiz. Mikrostruktur, RAN, Nizhniy Novgorod, Russia
SO Poverkhnost (2000), (11), 84-88
 CODEN: PFKMDJ; ISSN: 0207-3528
PB Nauka
DT Journal
LA Russian
AB Aluminum film were deposited immediately after epitaxial growth of GaAs
 layer by the chem. vapor deposition technique with a dimethylethylamine
 alane source and H2 as a carrier gas. The film morphol., compn. and
 microstructure were studied by at. force microscopy (AFM), Auger electron
 spectroscopy and X-ray diffraction. Al film resistivity was measured with
 photolithog. formed bridges, and the Al/n-GaAs Schottky barrier properties
 were measured with circular mesas. When the deposition temp. increased
 from 130.degree.C to 360.degree.C the film roughness and barrier
 properties became worse. At the same time the preferred Al grain
 orientation was found to vary from the Al(111) texture at low temps. to
 the epitaxial Al(110) at high ones. The AFM scan is shown to provide
 fairly accurate angles between micrograin facets. The obtained facet
 orientations are explained by the general laws of crystal growth, and the
 results affirm the assumption of impurity absence at the
 metal-semiconductor interface.

L5 ANSWER 17 OF 3097 CAPLUS COPYRIGHT 2003 ACS
AN 2001:94884 CAPLUS
DN 134:295854
TI Reduction of piperidino- and related sec. amino(dihalo)boranes with LiAlH4
 in toluene and related reactions
AU Maringgele, Walter; Noltemeyer, Mathias; Teichgraber, Jorg; Meller, Anton
CS Institute of Inorganic Chemistry, University of Gottingen, Gottingen,
 D-37077, Germany
SO Main Group Metal Chemistry (2000), 23(12), 735-760
 CODEN: MGMCE8; ISSN: 0792-1241

PB Freund Publishing House Ltd.
DT Journal
LA English
AB The products of the redn. of dihalo(diorganoamino)boranes with LiAlH₄ in toluene depend upon the steric requirement of the amino substituents. It shows that upon using different procedures to produce secondary-amino(dihydro)boranes the results depend critically from the solvent, the stoichiometry of the educts and the temp. applied beyond the sterical factors. However, certain procedures are preferably used to produce distinct moieties. Eight procedures (in part using different ratios of the educts) were applied and evaluated for their results. Mixts. of products were explored by NMR and MS. Pure compds. are characterized by NMR: ¹H, ¹¹B, ¹³C, MS and elemental analyses or high resoln. MS. An x-ray structure anal. is presented for dimeric piperidinoborane.

L5 ANSWER 18 OF 3097 CAPLUS COPYRIGHT 2003 ACS

AN 2001:89842 CAPLUS

DN 134:139547

TI 3a-Tosyloxymethyltropene(N8-B)-borane

AU Batsanov, Andrei S.; Howard, Judith A. K.; O'Hagan, David; Tavasli, Mustafa

CS Dep. Chem., Univ. Durham, Durham, DH1 3LE, UK

SO Acta Crystallographica, Section C: Crystal Structure Communications (2000), C56(11), E512-E513

CODEN: ACSCEE; ISSN: 0108-2701

PB Munksgaard International Publishers Ltd.

DT Journal

LA English

AB [Alternative name: 8-methyl-8-azabicyclo[3.2.1]octan-3-ylmethyl p-toluenesulfonate(N8-B)-borane], C₁₆H₂₆BN₃O₃S, has the tosyloxymethyl substituent in an endo position. The BH₃ group is equatorial and the (N-bonded) Me group is axial, relative to the six-membered heterocycle. The N-B bond of 1.649(8) Å is one of the longest known. Crystallog. data are given.

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 19 OF 3097 CAPLUS COPYRIGHT 2003 ACS

AN 2001:87005 CAPLUS

DN 134:216463

TI Complexes of heteroscorpionate trispyrazolylborate anionic ligands. Part I. The crystal structure and reactivity of thiocyanato[hydrobis(3-phenylpyrazolyl)(3-tert-butylpyrazolyl)borato]cobalt(II) complex

AU Lukasiewicz, Marta; Ciunik, Zbigniew; Wolowiec, Stanislaw

CS Department of Chemistry, University of Wroclaw, Wroclaw, 50-383, Pol.

SO Polyhedron (2000), 19(20-21), 2119-2125

CODEN: PLYHDE; ISSN: 0277-5387

PB Elsevier Science Ltd.

DT Journal

LA English

AB The high-spin Co(II) complexes with homoscorpionate hydrotris(3-phenylpyrazolyl)borate (TpPh) and heteroscorpionate complexes Tp'Co(X), where Tp' = hydrobis(3-phenylpyrazolyl)(3-tert-butylpyrazolyl)borate {HB(3-Phpz)₂(3-t-Bupz)} anionic ligands were studied. The former tripodal ligand provides intermediate steric hindrance for the central metal ion, which is able to adopt two addnl. donors from thiocyanate and neutral ligands like pyrazole (pzH) and MeOH, or two O donors from the lactate anion. Replacement of one of three 3-Ph substituents in TpPh by the tert-Bu one produces a ligand of high steric hindrance which gave tetracoordinate Tp'Co(X) complexes, where X = thiocyanate or monodentate lactate. The complexes were studied by the ¹H NMR spectroscopic method in soln. and two of them, TpPhCo(NCS)(pzH) and [HB(3-Phpz)₂(3-t-Bupz)]Co(NCS), were characterized structurally by x-ray crystallog.

RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 20 OF 3097 CAPLUS COPYRIGHT 2003 ACS
 AN 2001:86119 CAPLUS
 DN 134:123828
 TI [2-(1H-Inden-3-yl)ethyl]diphenylphosphine-borane
 AU Groux, Laurent F.; Zargarian, Davit
 CS Departement de Chimie, Universite de Montreal, Montreal, QC, H3C 3J7, Can.
 SO Acta Crystallographica, Section C: Crystal Structure Communications (2000), C56(8), E366-E367
 CODEN: ACSCEE; ISSN: 0108-2701
 PB Munksgaard International Publishers Ltd.
 DT Journal
 LA English
 AB The title compd., C₂₃H₂₄BP, crystallizes in the centrosym. space group P2₁/c, with one mol. in the asym. unit. The indene moiety is essentially planar. The P-B bond length is 1.923(3) Å, which is within the expected range. Crystallog. data are given.
 RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 21 OF 3097 CAPLUS COPYRIGHT 2003 ACS
 AN 2001:66054 CAPLUS
 DN 134:359212
 TI Recent advances in ab initio time-dependent Hartree-Fock theory and their applications to predict nonlinear optical properties of semiconductor nanoclusters
 AU Karna, Shashi P.; Korambath, Prakashan P.
 CS Air Force Research Laboratory, Space Vehicles Directorate, Kirtland AFB, NM, 87117-5776, USA
 SO Materials Research Society Symposium Proceedings (2000), 579(Optical Properties of Materials), 169-178
 CODEN: MRSPDH; ISSN: 0272-9172
 PB Materials Research Society
 DT Journal
 LA English
 AB Recent advancements in ab initio time-dependent Hartree-Fock (TDHF) theory have made it a technique of choice for modeling nanoscale nonlinear optical (NLO) materials from 1st-principles. This method was used to study structure-NLO property relations of GaN, GaP and GaAs clusters. The geometry of the clusters used in the study was optimized by ab initio Hartree Fock (HF) calcns. using even tempered Gaussian (ETG) basis set. The clusters used in this study are GamXn (m = 1,3,4,7 and n = 1,3,4,7) where X = N, P, and As. The GamXn clusters are in a charge neutral (q = 0) state for m = n and in appropriately charged state for m not equal to n. The magnitude of the calcd. (hyper)polarizabilities appears to strongly depend on the compn. of the cluster. For the same compn. of heteroatoms, the hyperpolarizability depends on the size as well as the geometry of the cluster. The cluster size-dependence of calcd. (hyper)polarizabilities is more pronounced for the 1st-hyperpolarizability, .beta., than for the polarizability, .alpha.. The calcd. .beta.(-.omega..rho.;.omega.1;.omega.2) corresponding to various 2nd order effects shows the following trend .beta.(-2.omega.;.omega.;.omega.) > .beta.(-.omega.;0;.omega.) > .beta.(0;0,0).
 RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 22 OF 3097 CAPLUS COPYRIGHT 2003 ACS
 AN 2001:37486 CAPLUS
 DN 134:187473
 TI Hydridoborates and hydridoborato metallates part 26. Preparation and structures of dihydridoborates of lithium and potassium
 AU Knizek, Jorg; Noth, Heinrich
 CS Department of Chemistry, Inorganic Chemistry, University of Munich,

Munich, D-81377, Germany
 SO Journal of Organometallic Chemistry (2000), 614-615, 168-187
 CODEN: JORCAI; ISSN: 0022-328X
 PB Elsevier Science S.A.
 DT Journal
 LA English
 AB Alkali metal dihydrido borates were prepd. by three different routes. They were characterized by ¹¹B-NMR spectroscopy and, in part, by IR spectroscopy. The following compds. were obtained: lithium dihydridodimethylborate and lithium methyltrihydridoborate, (1) and (2), lithium and potassium dihydridodi(tert-butyl)borate, (3) and (4), lithium dihydridodi(cyclopentyl)borate (5), lithium and potassium dihydrido(9-boratabicyclo[3.3.0]nonane), (6a,b), potassium dihydrido(boratacyclohexane) (7), lithium dihydridoboratacycloheptane (8), and lithium dihydrido-9-boratafluorene (9). In the process of the formation of 1 and 7 also Li(H3BMe) (2) and Li₂(H3B-(CH₂)₅-BH₃) are formed, most likely by a ligand redistribution process which is not operative if bulky organyl groups are bound to the boron atom or if the boron atom is part of a ring system. In case of catecholate no H₂B(OR)₂-anions were detected but for ephedrino or dithiolato ligands the corresponding dihydrido borate complexes were readily detected by ¹¹B-NMR but the latter converted in THF soln. into B(S₂R')₂ anions. MO calcns. show that the ligand redistribution for H₂BX₂⁻ ions into BH₄⁻ and BX₄⁻ becomes thermodynamically more favored with increasing electronegativity of the substituent X. Characterization of the new hydrido borate species is usually unambiguous, but Li[H₂BO(C₆H₄)₂] (10) shows an anomalous temp. dependent behavior in THF soln. which can be attributed to an equil. involving Li(2H, 2O), Li(2H, 3O), and Li(3O) structural units. This is supported by the x-ray structure of dimeric 10.cntdot.THF and monomeric 10.cntdot.THF.cntdot.TMEDA. While 9.cntdot.3THF is monomeric and contains doubly bridging H₂B groups, all other dihydrido diorganyl borates are dinuclear. The interaction between the alkali metal center and the boron bonded H atoms depends on no. and size of the auxiliary ligands. Agostic Li...H-C interactions play a role if .beta.-H atoms are present and when the alkali metal cation is not coordinatively satd. by the auxiliary ligand and the H(B) hydrogens. The most sym. and so far unique arrangement is found for [6a.cntdot.2THF]₂ where all four H(B) hydrogens form Li...H...Li bridges. Also lithium bis(dithiocatecholato)borate, 17.cntdot.2THF is dimeric. Its Li centers are coordinated by four sulfur and two oxygen atoms. These atoms form a double heterocubane structure with two diametral edges missing.

RE.CNT 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 23 OF 3097 CAPLUS COPYRIGHT 2003 ACS
 AN 2001:36496 CAPLUS
 DN 134:223074
 TI Study on the infrared laser-induced photopolymerization of TEGDA by real time FTIR
 AU Zhang, Shi-hai; Li, Bin; Tang, Li-ming; Yang, Rui; Zhou, Qi-xiang
 CS Department of Chemical Engineering, Tsinghua University, Beijing, 100084, Peop. Rep. China
 SO Gongneng Gaofenzi Xuebao (2000), 13(4), 407-410
 CODEN: GGXUEH; ISSN: 1004-9843
 PB Gongneng Gaofenzi Xuebao Bianjibu
 DT Journal
 LA Chinese
 AB Real time FTIR (RTFTIR) technique was employed to investigate the IR laser-induced photopolymn. of triethylene glycol diacrylate (TEGDA). A novel cationic cyanine dye-borate complex, 1,3,3,1',3',3'-hexamethyl-11-chloro-10,12-propylene tricarbo-cyanine triphenylbutylborate, which has max. electron absorption wavelength .lambda.max at 786 nm, was used as the photoinitiator. The conversion of double bond (.gamma.) and the polymn. rate (Rp) have been detd. from the drop of the absorption at 1620 cm⁻¹ and

1635 cm⁻¹ in FTIR spectra under laser irradiation. γ increased rapidly and reached 15% with corresponding R_p of 0.0084 mol.cntdot.L-1.cntdot.s-1 in the first 20 s when laser irradiation intensity was 17.0 mW/cm², higher laser irradiation intensity could lead to greater γ and R_p . R_p was proportional to the 0.47 power of the laser power at the first few seconds' irradiation. The termination mechanism of photopolymerization was coupling between two propagating radicals at the beginning stage of photopolymerization. Compared with TEGDA, diethylene glycol diacrylate (DEGDA) had shorter soft chain and its final conversion was lower under the same irradiation conditions.

L5 ANSWER 24 OF 3097 CAPLUS COPYRIGHT 2003 ACS

AN 2001:18296 CAPLUS

DN 135:104331

TI Boronated nucleosides for BNCT

AU Tjarks, W.; Wang, J.; Chandra, S.; Ji, W.; Zhuo, J. C.; Lunato, A. J.; Cosqur, G. Y.; Eriksson, S.; Morrison, G. H.; Spielvogel, B. F.

CS Ohio State University, Columbus, OH, USA

SO KURRI-KR (2000), KURRI-KR-54, 157-158

CODEN: KURRBF; ISSN: 1342-0852

DT Report

LA English

AB Twelve N-3 substituted carboranyl thymidine derivs. (several newly synthesized), four thymidine analogs with non-boronated N-3 substituents, and six cyanoboranyl nucleosides were evaluated in phosphoryl transfer assays with recombinant human TK1, TK2, and dCK. For some of the N-3 substituted carboranyl thymidines, the measured phosphorylation rates were 38% that of thymidine. Cyanoboranyl derivs. of thymidine, 2'-deoxycytidine, and 2'-deoxyadenosine showed low but significant phosphorylation rates with TK1, TK2 and dCK. In vitro evaluation of 3-(carboranylbutyl)thymidine in T98G glioblastoma cells using ion microscopy techniques indicated generally homogenous intracellular boron concns. with slightly increased boron intensities in the nuclei of some cells and the chromosomal region of an isolated metaphase cell.

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 25 OF 3097 CAPLUS COPYRIGHT 2003 ACS

AN 2001:11347 CAPLUS

DN 134:202095

TI Synthesis and properties of organo-cyanoborane complexes of pentaamminecobalt(III)

AU Pinnell, Robert P.; Ballew, Nicole L.; Batchelder, Abigail M.; Bleha, Julie L.; Swatik, Sharon A.; Zanello, Andrew W.

CS Joint Science Department, W. M. Keck Science Center, Claremont McKenna Pitzer and Scripps Colleges, Claremont, CA, 91711, USA

SO Synthesis and Reactivity in Inorganic and Metal-Organic Chemistry (2000), 30(10), 1917-1927

CODEN: SRIMCN; ISSN: 0094-5714

PB Marcel Dekker, Inc.

DT Journal

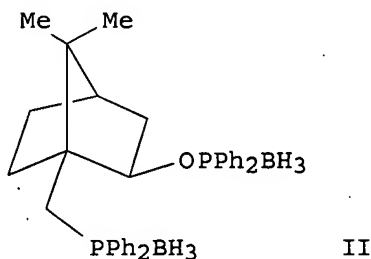
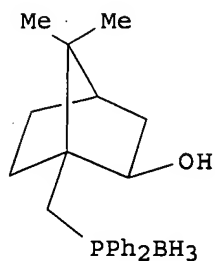
LA English

AB Organo-cyanoborane ligands R-BH₂-C.tplbond.N (R = trimethylamine, pyridine, or PPh₃) displace the CF₃SO₃⁻ anion from trifluoromethanesulfonatopentaamminecobalt(III) cations in acetone to yield the resp. nitrile complexes. These new cyanoborane complexes were characterized via elemental anal. and by IR, visible and NMR spectroscopy. The reactions of these complexes in aq. base and attempts to aminate the cyanide group in liq. NH₃ are described. The synthesis of some analogous alkane nitrile complexes is described as well as the kinetics of their hydration reactions in basic media.

RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 26 OF 3097 CAPLUS COPYRIGHT 2003 ACS
 AN 2001:4577 CAPLUS
 DN 134:178709
 TI Intramolecular alkylation of aromatic compounds. Part XXXIV. Synthesis of (pyridinylmethyl)indoles as potential precursors of ergolines
 AU Reimann, E.; Erdle, W.
 CS Department for Pharmazie, Zentrum for Pharmaforschung, Ludwig-Maximilians-Universitat Munchen, Munchen, D-81377, Germany
 SO Pharmazie (2000), 55(12), 907-912
 CODEN: PHARAT; ISSN: 0031-7144
 PB Govi-Verlag Pharmazeutischer Verlag
 DT Journal
 LA German
 OS CASREACT 134:178709
 AB Carbinols prepd. from N-protected 3-indolaldehydes and 2-bromo-5-methoxypyridine are smoothly hydrogenated to 3-[(5-methoxy-2-pyridinyl)methyl]indoles, which in turn give the corresponding indolines by NaCNBH₃-redn. On treatment of N-benzyl-3-[hydroxy(5-methoxy-2-pyridinyl)methyl]indole with acid, bis(N-benzyl-3-indolyl)(5-methoxy-2-pyridinyl)methane and 5-methoxy-2-pyridinaldehyde are generated. 2-Acetyl-5-methoxypyridine is found as a byproduct of 3-[hydroxy(5-methoxy-2-pyridinyl)methyl]indole. As byproduct of the redn., a borane adduct is detected.
 RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 27 OF 3097 CAPLUS COPYRIGHT 2003 ACS
 AN 2001:3428 CAPLUS
 DN 134:207970
 TI A concise ex chiral pool approach to novel bidentate camphane phosphane ligands
 AU Sell, Thorsten; Laschat, Sabine; Dix, Ina; Jones, Peter G.
 CS Institut fur Organische Chemie, Technische Universitat Braunschweig, Braunschweig, 38106, Germany
 SO European Journal of Organic Chemistry (2000), (24), 4119-4124
 CODEN: EJOCFK; ISSN: 1434-193X
 PB Wiley-VCH Verlag GmbH
 DT Journal
 LA English
 GI



AB The bidentate hydroxy phosphane I and the phosphane phosphinite II, each bearing a camphane skeleton, were prepd. in five and six steps (52% and 28% yield), resp., from (1S)-(+)-camphorsulfonic acid via the triethylsilyl-protected iodide as a key intermediate. An X-ray crystal structure was obtained for II.
 RE.CNT 49 THERE ARE 49 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

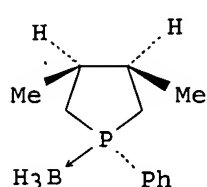
L5 ANSWER 28 OF 3097 CAPLUS COPYRIGHT 2003 ACS
 AN 2000:907818 CAPLUS
 DN 134:89866
 TI Growth and characterization of aluminum oxide (Al₂O₃) thin films by plasma-assisted atomic layer controlled deposition
 AU Jeong, Chang-Wook; Lee, Jang-Sik; Joo, Seung-Ki
 CS School of Materials Science and Engineering, Seoul National University, Seoul, 151-742, S. Korea
 SO Taehan Kumsok, Chaeryo Hakhoechi (2000), 38(10), 1395-1399
 CODEN: TKHABB
 PB Korean Institute of Metals and Materials
 DT Journal
 LA Korean
 AB Aluminum oxide thin films were deposited by plasma-assisted at. layer controlled deposition method in the temp. range of 100-125.degree.C using DMEAA (Dimethylethylamine alane [(CH₃)₂(C₂H₅)N:AlH₃]) as a source gas. Al was deposited by plasma-assisted ALD (At. Layer Deposition) method. And then, the Al films were oxidized into Al₂O₃ by the plasma oxidn. in the same chamber without breaking the vacuum. For phys. and elec. measurements, Al₂O₃ thin films of 15 nm thickness were prepd. by repetition of the above mentioned process. Thus prepd. Al₂O₃ thin films showed a refractive index of 1.68. The thickness and the refractive index fluctuation of the film over a 4 in. wafer were .+- .2.3% and .+- .1.9%, resp., for at. layer controlled film, while those were .+- .7.8%, .+- .6.4% for all the sputter-deposited films. The leakage c.d. and breakdown field were measured to be about 10⁻⁸ .ANG./cm² at 1 MV/cm and 7 MV/cm, resp. Considerable improvement of the elec. properties could be realized by the post oxygen-plasma annealing at 200.degree.C.

L5 ANSWER 29 OF 3097 CAPLUS COPYRIGHT 2003 ACS
 AN 2000:893362 CAPLUS
 DN 134:155821
 TI On the choice of precursors for the MOVPE-growth of high-quality Al_{0.30}Ga_{0.70}As/GaAs v-groove quantum wires with large subband spacing
 AU Kaluza, A.; Schwarz, A.; Gauer, D.; Hardtdegen, H.; Nastase, N.; Luth, H.; Schapers, T.; Meertens, D.; Maciel, A.; Ryan, J.; O'Sullivan, E.
 CS ISI, Forschungszentrum Julich, Julich, 52425, Germany
 SO Journal of Crystal Growth (2000), 221, 91-97
 CODEN: JCRGAE; ISSN: 0022-0248
 PB Elsevier Science B.V.
 DT Journal
 LA English
 AB MOVPE growth is used to prep. high-quality v-groove quantum wires in the AlGaAs/GaAs system. The particular aim of this work is to find suitable precursor combinations and growth conditions with which quantum wire structures can be achieved, where only the lowest subband is occupied and on which truly 1D transport can be studied. Different precursor combinations of GaEt₃, GaMe₃, AlMe₃, and Me₂AlC₂H₄NH₂ were employed for growth of the Al_{0.30}Ga_{0.70}As barrier layer. Calcns. of the 2D-Schrodinger equation show, that suitable quantum wire geometries are obtained when using combinations with GaMe₃. High-quality material is achieved at 575.degree. for GaMe₃/Me₂AlC₂H₄NH₂ and 595.degree. for GaMe₃/AlMe₃. In general, lower growth temps. lead to the preferential lower radii of curvature for a given precursor combination. A comparison of the best two combinations shows that GaMe₃/AlMe₃ is best suited for growth of the Al_{0.30}Ga_{0.70}As barrier layer with respect to the intended application.

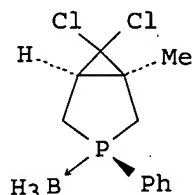
RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 30 OF 3097 CAPLUS COPYRIGHT 2003 ACS
 AN 2000:887420 CAPLUS
 DN 134:237554
 TI One-pot transformation of cyclic phosphine oxides to phosphine-boranes by dimethyl sulfide-borane

AU Keglevich, Gyorgy; Fekete, Melinda; Chuluunbaatar, Tungalag; Dobo, Andras;
 Harmat, Veronika; Tke, Laszlo
 CS Department of Organic Chemical Technology, Budapest University of
 Technology and Economics, Budapest, 1521, Hung.
 SO Perkin 1 (2000), (24), 4451-4455
 CODEN: PERKF9; ISSN: 1470-4358
 PB Royal Society of Chemistry
 DT Journal
 LA English
 GI



I



II

AB Different types of cyclic phosphine oxides, such as tetrahydrophosphole oxide, phosphabicyclo[3.1.0]hexane 3-oxide and phosphabicyclo[2.2.1]heptene 7-oxides were efficiently converted to phosphine-boranes, e.g. I and II, under relatively mild conditions by reaction with 4.4 equiv. of di-Me sulfide-borane. The more strained hetero-ring the starting phosphine oxide has, the easier to accomplish the change in the P-function, that takes place through the corresponding phosphine intermediate. It is noteworthy that the imide carbonyl groups in starting materials were fully reduced by the borane. The crystal structure of I and II were detd.

RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 31 OF 3097 CAPLUS COPYRIGHT 2003 ACS

AN 2000:887413 CAPLUS

DN 134:237553

TI New potential (P,S)-ligands containing tetrathiafulvalene

AU Pellon, Pascal; Brule, Emilie; Bellec, Nathalie; Chamountin, Karine;
 Lorcy, Dominique

CS Synthese et Electrosynthese Organiques, UMR CNRS 6510, Universite de
 Rennes 1, Rennes, 35042, Fr.

SO Perkin 1 (2000), (24), 4409-4412

CODEN: PERKF9; ISSN: 1470-4358

PB Royal Society of Chemistry

DT Journal

LA English

AB The synthesis of novel (P,S)-ligands contg. tetrathiafulvalene (TTF) from preformed TTF derivs. is reported. These compds. were prepd. by using borane as protecting group for the phosphine. The electrochem. properties of these new ligands are presented.

RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 32 OF 3097 CAPLUS COPYRIGHT 2003 ACS

AN 2000:881152 CAPLUS

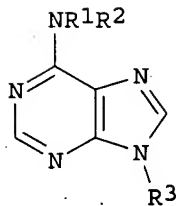
DN 134:29660

TI Preparation of boronic acid-containing purines, nucleosides, and amino acids as inhibitors of bacterial adenine DNA methyltransferases

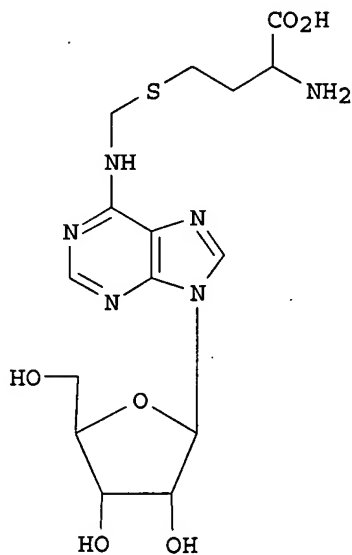
IN Benkovic, Stephen J.; Shapiro, Lucille; Baker, Stephen J.; Wahnon, Daphne

C.; Wall, Mark
 PA Penn State Research Foundation, USA
 SO PCT Int. Appl., 55 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000075142	A2	20001214	WO 2000-US14479	20000525 <--
	WO 2000075142	A3	20010628		
	W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
	EP 1181291	A2	20020227	EP 2000-964879	20000525
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO			
	JP 2003501431	T2	20030114	JP 2001-502424	20000525
PRAI	US 1999-135870P	P	19990525		
	US 1999-154582P	P	19990917		
	US 2000-174256P	P	20000103		
	WO 2000-US14479	W	20000525		
OS	MARPAT 134:29660				
GI					



I



II

AB This invention provides broad-spectrum antibiotics I R₁-R₃ are the same or different and are independently hydrogen, lower alkyl, aryl or substituted aryl, lower alkoxy, lower alkoxyalkyl, or cycloalkyl or cycloalkyl alkoxy, where each cycloalkyl group has from 3-7 members, where up to two of the cycloalkyl members are optionally hetero atoms selected from oxygen and nitrogen, and where any member of the alkyl, aryl or cycloalkyl group is optionally substituted with halogen, lower alkyl or lower alkoxy, aryl or substituted aryl, and where R₃ can be ribose, deoxyribose or

phosphorylated derivs. thereof, R1-R3 are not all hydrogen and when R3 is ribose, deoxyribose or phosphorylated derivs. thereof, one of R1 or R2 is not hydrogen, that are inhibitors of bacterial adenine DNA methyltransferases. Thus, amino acid-contg. nucleoside II was prepd. and tested in vitro for its antibacterial activity (EC50 = 2 mM, Ki = 160 .mu.M).

L5 ANSWER 33 OF 3097 CAPLUS COPYRIGHT 2003 ACS

AN 2000:878091 CAPLUS

DN 134:186127

TI CVD of conformal alumina thin films via hydrolysis of AlH3(NMe2Et)

AU Fahlman, Bradley D.; Barron, Andrew R.

CS Department of Chemistry, Rice University, Houston, TX, 77005, USA

SO Advanced Materials for Optics and Electronics (2000), 10(3-5), 135-144

CODEN: AMELE7; ISSN: 1057-9257

PB John Wiley & Sons Ltd.

DT Journal

LA English

AB Deposition of highly conformal alumina thin films was carried out by hydrolysis of the liq. alane precursor, AlH3(NMe2Et). Depositions onto Si wafers, quartz and C fibers were all carried out using a hot-wall atm. pressure CVD (APCVD) system. Optimum growth conditions are at 165.degree. and with an AlH3(NMe2Et):H2O ratio of <1:25. Films were characterized by SEM, microprobe and elec. cond. measurements. Growth rates were of the order of 40-80 .ANG. min-1 at 165.degree.. The conformality of the films was illustrated using Si wafers that were etched prior to deposition. Deposition onto ZnS EL-phosphor particles was accomplished in a simple fluidized-bed APCVD reactor. The deposited films were conformal and continuous. No significant redn. in the initial brightness or change in the color balance of the phosphor was obsd. from the coating process.

RE.CNT 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 34 OF 3097 CAPLUS COPYRIGHT 2003 ACS

AN 2000:872160 CAPLUS

DN 134:147660

TI Reactions of 1,3,2,4-dithiadiphosphetane-2,4-disulfides with alkyl borates

AU Nizamov, Il'yas S.; Sergeenko, Gul'nur G.; Batyeva, Elvira S.; Azancheev, Nail M.; Al'fonsov, Vladimir A.

CS A. E. Arbuzov Institute of Organic and Physical Chemistry, Russian Academy of Sciences, Kazan, 420088, Russia

SO Main Group Chemistry (2000), 3(2), 129-135

CODEN: MGCHE7; ISSN: 1024-1221

PB Gordon & Breach Science Publishers

DT Journal

LA English

OS CASREACT 134:147660

AB New B derivs. of dithiophosphonic acids 4-ROC6H4P(S)(OR1)SB(OR1)2 (R = Me, Et, R1 = CHMe2, CH2CHMe2; R = Me, R1 = CMe3) 3a-e and 4-MeOC6H4P(S)(OCH2CHMe2)SBPh2 5 were obtained in low to moderate yields by the reactions of Lawesson's reagent 1a and its Et homolog 1b with trialkyl borates (R1O)3B 2a-c (same R1) and Me2CHCH2OBPh2 4. Low frequency ultrasound irradiation (22 kHz, power 130 W) leads to redn. in reaction temp. and time in the reactions studied. The prepd. compds. were identified by IR, 1H and 31P NMR and mass spectra as well as elemental analyses.

RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 35 OF 3097 CAPLUS COPYRIGHT 2003 ACS

AN 2000:863747 CAPLUS

DN 134:35034

TI Photosensitive composition for photoresist used for manufacture of printed circuit board

IN Natori, Michiko; Hidaka, Takahiro
PA Hitachi Chemical Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000338659	A2	20001208	JP 1999-149011	19990528 <--
PRAI	JP 1999-149011		19990528		

AB The title photosensitive compn. comprises (A) a binder polymer, (B) a photopolymerizable compd. having an ethylenic unsatd. group, (C) a dimer of 2,4,5-triarylimidazole, and (D) a sulfonium borate. This photosensitive compn. is used as a photoresist for manuf. of a printed circuit board.

L5 ANSWER 36 OF 3097 CAPLUS COPYRIGHT 2003 ACS
AN 2000:862634 CAPLUS
DN 134:252392

TI Synthesis and molecular structure of 1,12-dicarba-closo-dodecaborane(12)-1,12-dithiol, 1,12-(SH)2-1,12-C2B10H10, in the gaseous phase, determined by electron diffraction and ab initio calculations; geometrical consequences of three-dimensional aromaticity in carbaboranes 1,12-X2-1,12-C2B10H10

AU Hnyk, Drahomir; Holub, Josef; Hofmann, Matthias; von Rague Schleyer, Paul; Robertson, Heather E.; Rankin, David W. H.

CS Institute of Inorganic Chemistry, Academy of Sciences of the Czech Republic, Rez near Prague, CZ-250 68, Czech Rep.

SO Dalton (2000), (24), 4617-4622
CODEN: DALTFG

PB Royal Society of Chemistry
DT Journal
LA English

OS CASREACT 134:252392

AB The mol. structure of 1,12-dicarba-closo-dodecaborane(12)-1,12-dithiol, 1,12-(SH)2-1,12-C2B10H10, prepd. by an improved synthesis, was detd. by gas-phase electron diffraction restrained by ab initio calcns. The carbaborane core, shown by calcns. at the MP2(fc)/6-31G* level to be very close to D5d symmetry, gave good agreement between theor. and exptl. 11B NMR chem. shifts. A model of the entire mol. in overall C2 symmetry led to an exptl. geometry (RG = 0.077), in good agreement with the theor. findings. The substituents do not distort the cage significantly. The well detd. parameters, the C-B, B(2)-B(3), and B(2)-B(7) distances, 170.6(4), 177.5(3) and 176.5(9) pm resp. (ra), are consistent with the analogous parameters established exptl. for other 1,12-disubstituted 1,12-dicarbadoecaboranes. Whereas the C-B and B-B distances are relatively const. in the MP2(fc)/6-31G* geometries of carbaboranes 1,12-X2-1,12-C2B10H10 (in addn. to SH, X = H, Li, BeH, BH2, CH3, SiH3, NH2, OH, F and Cl) the C(1).cntdot..cntdot..cntdot.C(12) distances and B(2)-C(1)-C(12) angles are appreciably sensitive to the nature of X, in a similar manner to the para-disubstituted benzene derivs., 2 .times. B(2)-C(1)-C(12) being viewed as an analog of the ipso angle in the latter.

RE.CNT 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 37 OF 3097 CAPLUS COPYRIGHT 2003 ACS
AN 2000:862617 CAPLUS
DN 134:260421

TI A zinc thiolate species which mimics aspects of the chemistry of the Ada repair protein and matrix metalloproteinases: the synthesis, structure and reactivity of the tris(2-mercapto-1-phenylimidazolyl)hydroborato complex [TmPh]ZnSPH

AU Bridgewater, Brian M.; Fillebeen, Tauqir; Friesner, Richard A.; Parkin,

Gerard

CS Department of Chemistry, Columbia University, New York, NY, 10027, USA
SO Dalton (2000), (24), 4494-4496
CODEN: DALTFG

PB Royal Society of Chemistry

DT Journal

LA English

AB The tris(2-mercapto-1-phenylimidazolyl)hydroborato ligand, [TmPh], was used to prep. the Zn phenylthiolate deriv., [TmPh]ZnSPh, which provides a good structural model for Zn enzymes that possess [Zn(Cys)₄] motifs. The reactivity of the thiolate linkage in [TmPh]ZnSPh mimics the chem. of the Ada protein and the activation mechanism of matrix metalloproteinases.

RE.CNT 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 38 OF 3097 CAPLUS COPYRIGHT 2003 ACS

AN 2000:862045 CAPLUS

DN 134:116107

TI Total Synthesis of (+-)-Cytisine

AU O'Neill, Brian T.; Yohannes, Daniel; Bundesmann, Mark W.; Arnold, Eric P.

CS Pfizer Global Research and Development, Pfizer Inc., Groton, CT, 06340, USA

SO Organic Letters (2000), 2(26), 4201-4204

CODEN: ORLEF7; ISSN: 1523-7060

PB American Chemical Society

DT Journal

LA English

OS CASREACT 134:116107

AB The nicotine partial agonist cytisine was prepd. in five steps featuring an "in situ" Stille or Suzuki biaryl pyridine coupling. Differentiation of the pyridyl rings was accomplished via selective benzylation and then redn. of a pyridinium ring. The penultimate diazabicyclo[3.3.1]nonane intermediate was obtained with high diastereoselectivity. A similar sequence has been employed for the synthesis of novel deriv. 9-methoxycytisine.

RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 39 OF 3097 CAPLUS COPYRIGHT 2003 ACS

AN 2000:859494 CAPLUS

DN 134:131573

TI C-H activation by direct borane-hydrocarbon dehydrogenation: kinetic and thermodynamic aspects

AU Goldfuss, Bernd; Knochel, Paul; Bromm, Lars O.; Knapp, Kolja

CS Organisch-Chemisches Institut der Universitat Heidelberg, Heidelberg, 69120, Germany

SO Angewandte Chemie, International Edition (2000), 39(22), 4136-4139

CODEN: ACIEF5; ISSN: 1433-7851

PB Wiley-VCH Verlag GmbH

DT Journal

LA English

AB To study the factors influencing the reactivity and selectivity of direct, uncatalyzed borane-hydrocarbon dehydrogenations, the kinetic and thermodyn. aspects of the dehydrogenation reaction of BH₃ with H-E (E = CH₃, NH₂, OH) and C₆H₅X (X = NMe₂, OMe, t-Bu, Me, H, F, Cl, Br, COMe, CF₃, CN, NO₂) were studied by theor. methods (B3LYP/MP2). The results suggest that relatively small activation barriers (.1 to req. 30 kcal/mol) are to be expected for dehydration reactions between borane and hydrocarbons that occur via four-center transition states.

RE.CNT 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 40 OF 3097 CAPLUS COPYRIGHT 2003 ACS

AN 2000:856665 CAPLUS
 DN 134:147956
 TI Preparation and characterization of organic-inorganic hybrid materials incorporating diphosphino moieties. Study of the accessibility of the phosphorus atoms included into the material
 AU Bezombes, Jean-Philippe; Chuit, Claude; Corriu, Robert J. P.; Reye, Catherine
 CS Laboratoire de Chimie Moleculaire et Organisation du Solide. UMR 5637, Universite Montpellier II, Montpellier, F-34095, Fr.
 SO Canadian Journal of Chemistry (2000), 78(11), 1519-1525
 CODEN: CJCHAG; ISSN: 0008-4042
 PB National Research Council of Canada
 DT Journal
 LA English
 AB The hydrolysis-polycondensation by the sol-gel process of the arom. diphosphines (X₃SiC₆H₄)₂PC₆H₄P(C₆H₄SiX₃)₂, which are rigid mols. bearing four hydrolysable SiX₃ groups (X = OiPr, H), leads to new org.-inorg. hybrid materials, characterized by solid state ¹³C, ²⁹Si, and ³¹P NMR spectroscopies. The accessibility of the P centers incorporated into the xerogel obtained from the diphosphine with X = OiPr was studied. All the P atoms reacted quant. with H₂O₂, S₈, and CH₃I but only 20% with the more bulky reagent W(CO)₅.cndot.THF. This result is explained by the rigidity of the inorg. network resulting from the high no. of hydrolysable Si-OiPr groups in the precursor.

RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 41 OF 3097 CAPLUS COPYRIGHT 2003 ACS
 AN 2000:855026 CAPLUS
 DN 134:163099
 TI Radical-based reduction of phosphine sulfides and phosphine selenides by (Me₃Si)₃SiH
 AU Romeo, R.; Wozniak, L. A.; Chatgililoglu, C.
 CS I.Co.C.E.A., Consiglio Nazionale delle Ricerche, Bologna, 40129, Italy
 SO Tetrahedron Letters (2000), 41(50), 9899-9902
 CODEN: TELEAY; ISSN: 0040-4039
 PB Elsevier Science Ltd.
 DT Journal
 LA English
 OS CASREACT 134:163099
 AB Tris(trimethylsilyl)silane reacted with phosphine sulfides RR₁R₂P(S) (R = R₁ = R₂ = n-Bu, Ph; R = Me, R₁ = t-Bu, R₂ = Ph; R = Me, R₁ = Ph, R₂ = o-MeOC₆H₄) and phosphine selenides RR₁R₂P(Se) (R = R₁ = R₂ = n-Bu, Ph) under free radical conditions to give the corresponding phosphines RR₁R₂P or phosphine-borane complexes RR₁R₂P-BH₃ after reaction of crude product with THF-BH₃ in good yields. Stereochem. studies on P-chiral phosphine sulfides showed that these redns. proceed with retention of configuration.

RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 42 OF 3097 CAPLUS COPYRIGHT 2003 ACS
 AN 2000:852707 CAPLUS
 DN 134:202029
 TI Synthesis and characterization of the neutral dinuclear hydrido complexes of platinum with bridging phosphides cis-Pt₂(H)₂(PHBut₂)₂(.mu.-H)(.mu.-PBut₂) (Pt-Pt) and trans-[Pt(H)(PHBut₂)(.mu.-PBut₂)]₂ (Pt-Pt)
 AU Mastorilli, Piero; Palma, Mariangela; Fanizzi, Francesco Paolo; Nobile, Cosimo Francesco
 CS Centro C.N.R. M.I.S.O. and Istituto di Chimica del Politecnico di Bari, Bari, 70125, Italy
 SO Dalton (2000), (23), 4272-4276
 CODEN: DALTFG
 PB Royal Society of Chemistry

DT Journal
LA English
AB Trans-PtCl₂(PHBut₂)₂ (1) reacts with NaBH₄ in THF affording the dinuclear Pt(II) complexes cis-Pt₂(H)₂(PHBut₂)₂(μ-H)(μ-PBut₂)(Pt-Pt) (2) and trans-[Pt(H)(PHBut₂)(μ-PBut₂)]₂ (Pt-Pt) along with the B adduct BH₃.cntdot.PHBut₂. Pure 2 can be obtained in 85% yield in the reaction carried out in the presence of two equiv. of di-tert-butylphosphine.

RE.CNT 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 43 OF 3097 CAPLUS COPYRIGHT 2003 ACS

AN 2000:852385 CAPLUS

DN 134:207486

TI Evidence of a dihydrogen bond in gas phase: Phenol-borane-dimethylamine complex

AU Naresh Patwari, G.; Ebata, Takayuki; Mikami, Naohiko

CS Department of Chemistry, Graduate School of Science, Tohoku University, Sendai, 980-8578, Japan

SO Journal of Chemical Physics (2000), 113(22), 9885-9888

CODEN: JCPSA6; ISSN: 0021-9606

PB American Institute of Physics

DT Journal

LA English

AB We report here the formation of a gas phase complex bound by a dihydrogen bond between phenol and borane-dimethylamine in supersonic jets. Laser induced fluorescence excitation, fluorescence detected IR, and IR-UV hole-burning spectroscopies were carried out to characterize the complex. Quantum chem. calcns. were used to derive the structure of the complex, providing excellent agreement with the spectroscopic data. To the best of our knowledge, we for the first time established exptl. the formation of a dihydrogen bonded complex in the gas phase.

RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 44 OF 3097 CAPLUS COPYRIGHT 2003 ACS

AN 2000:851552 CAPLUS

DN 134:131594

TI Diphosphine oxide-Bronsted acid complexes as novel hydrogen-bonded self-assembled molecules

AU Matsukawa, Satoru; Imamoto, Tsuneo

CS Department of Chemistry Faculty of Science, Chiba University, Chiba, 263-8522, Japan

SO Journal of the American Chemical Society (2000), 122(51), 12659-12662

CODEN: JACSAT; ISSN: 0002-7863

PB American Chemical Society

DT Journal

LA English

AB Novel hydrogen-bonded supramols. based on interactions between an acid and a base were prepd. from (R,R)-1,2-bis(1-adamantylmethylphosphinyl)ethane (1) and tetrafluoroboric acid. Both linear and cyclic structures were obsd. Recrystn. from CH₂Cl₂-AcOEt gave the linear supramol. The structure was confirmed by single-crystal x-ray anal. On the other hand, the cyclic dimer was produced by recrystn. from CHCl₃-AcOEt. The structure was estd. by electron spray ionization mass spectrometry and single crystal x-ray anal. Significantly different enantioselectivities were obsd. in asym. protonation reactions of these two supramols. with silyl enolates.

RE.CNT 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 45 OF 3097 CAPLUS COPYRIGHT 2003 ACS

AN 2000:848932 CAPLUS

DN 134:109740

TI Synthesis, characterization and x-ray structural studies of novel
 dinuclear silver(I) complexes of poly(azolyl)borate ligands
 AU Effendy; Lobbia, Giancarlo Gioia; Pettinari, Claudio; Santini, Carlo;
 Skelton, Brian W.; White, Allan H.
 CS Department of Chemistry, The University of Western Australia, Nedlands,
 6907, Australia
 SO Inorganica Chimica Acta (2000), 308(1-2), 65-72
 CODEN: ICHAA3; ISSN: 0020-1693
 PB Elsevier Science S.A.
 DT Journal
 LA English
 AB Ag(I) complexes of tris- and tetrakis-(pyrazolyl)borates,
 tetrakis(imidazol-1-yl)borate, and hydrotris(3-methyl-1-imidazolyl-2-
 thione)borate, the previously recorded $[Ag\{HB(pz)_3\}]_2$,
 $[Ag\{HB(3,5-Me_2pz)_3\}]_2$, $[Ag\{B(pz)_4\}]_n$, together with $[Ag\{HB(4-Brpz)_3\}]_2$,
 $[Ag\{B(3-Mepz)_4\}]_n$, $[Ag\{B(Im)_4\}]_n$ (Him = imidazole) and $[Ag\{Tm\}]_2$ (Tm =
 hydrotris(3-methyl-2-thioxo-1-imidazolyl)borate) were synthesized and
 further characterized by elemental anal., IR, Far-IR, 1H , ^{13}C NMR
 spectroscopy, and in the case of $[Ag\{Tm\}]_2$, also by a single-crystal x-ray
 study. Variable-temp. 1H NMR spectra indicate that $[Ag\{HB(3,5-Me_2pz)_3\}]_2$,
 $[Ag\{HB(4-Brpz)_3\}]_2$, and $[Ag\{B(pz)_4\}]_n$ are fluxional, with a pyrazolyl ring
 exchange process occurring rapidly at 293 but not at 193 K, whereas
 $[Ag\{HB(pz)_3\}]_2$ and the cryst. form of $[Ag\{HB(3,5-Me_2pz)_3\}]_2$ are not
 fluxional, even at room temp. The reactions between $K[HB(pz)_3]$,
 $K[HB(3,5-Me_2pz)_3]$, $K[B(pz)_4]$ or $K[Tm]$ and $AgNO_3$ in presence of N-and
 S-donor, unidentate or bidentate ligands such as pyrazole, imidazole,
 1-10-phenanthroline and 1-methylimidazoline(2,3H)thione (Hmimt) were
 studied. The authors also report the results of pos. ion FAB MS studies
 carried out for selected derivs.

RE.CNT 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 46 OF 3097 CAPLUS COPYRIGHT 2003 ACS
 AN 2000:848774 CAPLUS
 DN 134:100915
 TI Linear and nonlinear optical properties of three-coordinate organoboron
 compounds
 AU Yuan, Zheng; Collings, Jonathan C.; Taylor, Nicholas J.; Marder, Todd B.;
 Jardin, Christophe; Halet, Jean-Francois
 CS Department of Chemistry, University of Waterloo, Waterloo, ON, N2L 3G1,
 Can.
 SO Journal of Solid State Chemistry (2000), 154(1), 5-12
 CODEN: JSSCBI; ISSN: 0022-4596
 PB Academic Press
 DT Journal; General Review
 LA English
 AB Three-coordinate boron, isoelectronic with a trigonal planar carbonium
 ion, possesses a vacant p orbital which can conjugate with an org. π .
 system and thus serve as a π . acceptor. A series of sym. compds. of the
 general form $(mes)_2BXB(mes)_2$ [$mes = mesityl = 2,4,6 Me_3C_6H_2$; X =
 conjugated org. π . system such as $-(p-C_6H_4)_n-$ or $trans-trans-CH=CH-(p-$
 $C_6H_4)_n-CH=CH-$] as well as donor-acceptor compds. of the general form
 $DXB(mes)_2$ (D = π . donor such as MeO, MeS, H₂N, Me₂N, Ph₂P, ferrocenyl; X =
 conjugated org. π . system such as $-C_6H_4-$, $-C_6H_4-CH=CH-$,
 $-C_6H_4-C.tplbond.C-$, $-C_6H_4-CH=CH-C_6H_4-$) were studied, and representative
 single-crystal structures as well as linear (UV-vis absorption and
 fluorescence) and second- and third-order nonlinear optical properties [by
 elec. field-induced second harmonic generation (EFISH) and third harmonic
 generation (THG)] were examd. The bulky mesityl groups protect the boron
 centers from hydrolysis. Many of the compds. are highly fluorescent, with
 the unsym. ones displaying limited solvatochromic behavior in absorption
 spectra but significant solvatochromic effects in their emission spectra
 consistent with small dipole moments in the ground state and large dipole
 moments in the excited states. Results from other groups on the use of

related boron compds. as either electron-transport materials or emitting agents in electroluminescent devices, and on the prepn. and optical properties of three-coordinate boron-contg. conjugated polymers are presented. Preliminary results of extended Huckel (EH) and d. functional (DF) mol.-orbital calcns. on representative sym. diboron compds. and extended Huckel tight-binding (EHTB) calcns. on a model boron-contg. polymer are reported. The B(mes)2 group is a good .pi. acceptor, and three-coordinate boron moieties show significant promise for use in mol. and polymeric optical materials. These data are followed by a review with 9 refs. on crystal structure data of various boron dimesityl compds. (c) 2000 Academic Press.

RE.CNT 74 THERE ARE 74 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 47 OF 3097 CAPLUS COPYRIGHT 2003 ACS
AN 2000:845267 CAPLUS
DN 134:115720
TI Efficient coupling reactions of lithium alkynyl(triisopropoxy)borates with aryl halides: application to the antifungal terbinafine synthesis
AU Oh, Chang Ho; Jung, Seung Hyun
CS Department of Chemistry, Hanyang University, Seoul, 133-791, S. Korea
SO Tetrahedron Letters (2000), 41(44), 8513-8516
CODEN: TELEAY; ISSN: 0040-4039
PB Elsevier Science Ltd.
DT Journal
LA English
OS CASREACT 134:115720
AB Thermally stable lithium alkynyl(triisopropoxy)borates were reacted with aryl halides in the presence of Pd catalysts to give the corresponding cross-coupling products in excellent yields. The present methodol. was successfully applied to the antifungal terbinafine synthesis.

RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 48 OF 3097 CAPLUS COPYRIGHT 2003 ACS
AN 2000:837026 CAPLUS
DN 134:23533
TI Direct imaging-type lithographic original plate
IN Goto, Kazuki; Kawamura, Ken; Nagase, Koichi
PA Toray Industries, Inc., Japan
SO Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000330267	A2	20001130	JP 1999-142636	19990524 <--
PRAI	JP 1999-142636		19990524		

AB The title lithog. original plate comprises a substrate coated with a heat-sensitive layer contg. a compd. capable of being decompd. by the action of laser irradiation, a thermosetting compd., and a polyester and overcoated with an ink-repellent layer. The neg.-working lithog. original plate is capable of direct platemaking using laser beams and shows improved productivity and printing durability.

L5 ANSWER 49 OF 3097 CAPLUS COPYRIGHT 2003 ACS
AN 2000:837025 CAPLUS
DN 134:23532
TI Direct imaging-type waterless lithographic original plate
IN Nagase, Koichi; Ichikawa, Shigehiko; Ikeda, Norimasa
PA Toray Industries, Inc., Japan
SO Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF

DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000330266	A2	20001130	JP 1999-137154	19990518 <--
PRAI	JP 1999-137154		19990518		

AB The title lithog. original plate comprises a substrate coated successively with a heat insulating layer contg. .gtoreq.50 wt.% of an epoxy-urea resin, a heat-sensitive layer contg. a compd. capable of being decompd. by the action of laser irradiation and a thermosetting compd., and an ink-repellent layer. The neg.-working lithog. original plate is capable of direct platemaking using laser beams and shows improved image reproducibility and printing durability.

L5 ANSWER 50 OF 3097 CAPLUS COPYRIGHT 2003 ACS

AN 2000:836422 CAPLUS

DN 134:163097

TI Asymmetric synthesis of P-stereogenic o-hydroxyaryl-phosphine (borane) and phosphine-phosphinite ligands

AU Moulin, D.; Bago, S.; Bauduin, C.; Darcel, C.; Juge, S.

CS Unite mixte Universite de Cergy-Pontoise/ESCOM-Synth. Org. Select. et Chim. Organomet., FRE CNRS 2126, Cergy-Pontoise, 95031, Fr.

SO Tetrahedron: Asymmetry (2000), 11(19), 3939-3956

CODEN: TASYE3; ISSN: 0957-4166

PB Elsevier Science Ltd.

DT Journal

LA English

OS CASREACT 134:163097

AB The first asym. synthesis of P-stereogenic 2-hydroxyarylphosphine ligands is described, using borane complexation methodol. This synthesis is based on the highly stereoselective prepn. of bromoarylphosphinite boranes, leading to the 2-hydroxyarylphosphine derivs., by an intramol. ortho Fries-like rearrangement mediated in basic conditions. The o-anisyl-2-hydroxynaphthylphenylphosphine borane has been decomplexed in EtOH, affording the P(III)-stereogenic hydroxyarylphosphine ligand with 84% yield. The interest of the hydroxyarylphosphine borane is also demonstrated by the prepn. of a new class of phosphine-phosphinite ligands, by trapping the rearrangement products first with chlorodiphenylphosphine, Ph₂PCl, then with borane. The corresponding phosphine-phosphinites are obtained and purified as diborane complexes, with the decomplexation of these borane complexes being achieved by heating with dabco, to afford the free hybrid ligands with retention of the configuration at the P-atom (isolated yield up to 53%). The crystal structure of (S)-(-)-methyl-(1-bromo-2-naphthyl)phenylphosphinite borane was detd.

RE.CNT 84 THERE ARE 84 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT